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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,203	01/10/2002	Rick L. Allison	1322/84	9749

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EXAMINER

HU, JINSONG

ART UNIT PAPER NUMBER

2154

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,203

Applicant(s)

ALLISON ET AL.

Examiner

Jinsong Hu

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>see attached paper</u> . | 6) <input type="checkbox"/> Other: _____ |

The IDS mail date:1/10/02; 7/29/02; 7/2/02; 3/5/03; 3/19/03.

DETAILED ACTION

1. Claims 1- 36 are presented for examination.
2. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The following terms lack proper antecedent basis:

- i. As per claim 7, line 1, "the information".
- ii. As per claim 8, line 1, "the information".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over loppe et al. (US 2005/0043036 A1).
5. As per claims 1 and 5-6, loppe teaches the invention as claimed a method for mobile subscriber location management and for routing messages in a mobile

communications network environment, the method comprising:

in a network device [20, Fig. 1]:

receiving signaling messages transmitted between an HLR and a VLR related to the location or subscription of a mobile subscriber, extracting mobile subscriber information from a first signaling message, caching the mobile subscriber information (28, Fig. 1; [0032] – [0035], [0038]-[0039]; [0041]; lines 8-13 of [0059]); and using the cached information in the processing and routing of subsequent signaling messages relating to the mobile subscriber (26, Fig. 1; [0040], [0045]).

6. loppe does not specifically teach the network device is a routing node. However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to replace the network device with a routing node because doing so would simplify the system by caching subscriber's information in a routing node for future use. One of ordinary skill in the art would have been motivated to modify loppe's system with a routing node to increase the efficiency of the system.

7. As per claims 2-3 and 9, loppe teaches the step of receiving signaling messages includes receiving a mobile application part (MAP) UpdateLocation message and a mobile application part (MAP) InsertSubscriberData message ([0042] – [0043]).

8. As per claim 4, loppe teaches the step of extracting information from the first message includes extracting a mobile switching center (MSC) identifier that identifies an

MSC serving the mobile subscriber ([0032]).

9. As per claims 7 and 8, loppe teaches the step of caching the information includes storing the information in a visitor location cache (VLC) and caching the information includes storing the information in a home location cache (HLC) ([0029]-[0030]).

10. As per claim 10, loppe teaches the step of using the cached information in the processing and routing of subsequent mobile signaling messages includes using the cached information to generate and route a ProvideRoamingNumber_Ack message on behalf of a VLR in response to a received ProvideRoamingNumber message ([0039]; [0044]).

11. As per claims 11-12, loppe teaches the step of using the cached information in the processing and routing of subsequent mobile signaling messages includes using the cached information to process and route a received CancelLocation message ([0039]; [0044]).

12. As per claims 13 and 14, loppe teaches performing steps of claim1 in an SS7/IP gateway ([0029]; [0052]).

15. As per claims 15-28, since they teaching same limitations as claims 1-14 form different prospectors (router side and HLR side), they are rejected under the same basis as claims 1-14 above.

16. As per claims 29-36, since they are system claims of claims 1-14, they are rejected under the same basis as claims 1-14 above.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Hussain et al. (US 2002/0037750) discloses a mobile system;

Das et al. (US 2002/0026527) discloses an intra-domain system;

Khalil et al. (US 6,578,085) discloses a routing system; and

Xu et al. (US 6,738,362) discloses a mobile system.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jinsong Hu whose telephone number is (571) 272-3965. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jinsong Hu

April 15, 2005



VIET D. VU
PRIMARY EXAMINER